



ELECTRONIC TUBE REFERENCE

6678

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

Combined triode-pentode used as an oscillator and mixer or frequency converter in television or VHF communications receivers.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	8
NOMINAL HEATER	6.3 V / 450 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	5000 Ω
TRANSCONDUCTANCE	0.0085 S
AMPLIFICATION FACTOR	40
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	2.5 W
MAXIMUM CATHODE CURRENT	20 mA
<i>Alias/co-designation of 6U8A;</i>	

SECTION2 Pentode	
PLATE RESISTANCE	400000 Ω
TRANSCONDUCTANCE	0.0052 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	3 W
MAXIMUM SCREEN DISSIPATION	0.55 W
MAXIMUM CATHODE CURRENT	20 mA
<i>Alias/co-designation of 6U8A;</i>	

Triode-pentode for VHF oscillator/mixer service in mobile communications equipment.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1950 Sylvania

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1950 SYLVANIA

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	5000 ohm	—
Transconductance	8500 μ S	—
Amplification Factor	40	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	330 V	—
Maximum Plate Dissipation	3 W	—
Plate Voltage	150 V	Triode section
Plate Current	18 mA	Triode section

1950 SYLVANIA

Section 2 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	400000 ohm	—
Transconductance	5200 μ S	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	330 V	—
Maximum Screen Voltage	330 V	—
Maximum Plate Dissipation	3 W	—
Maximum Screen Dissipation	0.55 W	—
Plate Voltage	250 V	Pentode section

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen Voltage	110 V	Pentode section
Plate Current	10 mA	Pentode section


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1960 RCA Industrial and Communications Types

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1960 RCA INDUSTRIAL AND COMMUNICATIONS TYPES

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	450 mA	—
EquivalentType	6U8A	RenewalUse


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1965 Sylvania Electronic Tubes Vol3

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1965 SYLVANIA ELECTRONIC TUBES VOL3

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	450 mA	—
EquivalentElectricalType	6U8A	—
Plate Voltage	100 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	10 mA	—
Transconductance	5000 μ S	—
Amplification Factor	40	—

1965 SYLVANIA ELECTRONIC TUBES VOL3

Section 2 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	100 V	—
Screen Voltage	100 V	—
Plate Current	10 mA	—
Screen Current	3.5 mA	—
Transconductance	5200 μ S	—
Plate Resistance	400000 ohm	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1971 RCA HB3 Binder 3 of 7

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1971 RCA HB3 BINDER 3 OF 7

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Nominal
Heater current	450 mA	Nominal
Maximum plate voltage	330 V	Promoted published value
Maximum plate dissipation	3 W	Promoted published value
Grid No.1 to plate	0.006 mA	Direct Interelectrode Capacitances:
With heater voltage of	6 V	Characteristics, Class A I Amplifier:
Plate Supply Voltage	250 V	Characteristics, Class A I Amplifier:
Supply Voltage	110 V	Characteristics, Class A I Amplifier:

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode Resistor	68 ohm	Characteristics, Class A I Amplifier:
Plate Resistance (Approx.).	400000 ohm	Characteristics, Class A I Amplifier:
Plate Current	10 mA	Characteristics, Class A I Amplifier:
Grid-No.1 Voltage (Approx.)	1 V	Characteristics, Class A I Amplifier:
for plate μ a	-10 V	Characteristics, Class A I Amplifier:
PLATE VOLTAGE.	330 V	Maximum Ratings, Design-Naximum Values:
SUPPLY VOLTAGE	330 V	Maximum Ratings, Design-Naximum Values:
tween	330 V	Maximum Ratings, Design-Naximum Values:
PLATE DISSIPATION	3 W	Maximum Ratings, Design-Naximum Values:
respect to cathode	200 V	Maximum Ratings, Design-Naximum Values:
much as	35 V	Maximum Ratings, Design-Naximum Values:
volts =	7.5 V	Maximum Ratings, Design-Naximum Values:
135 volts positive with respect to cathode, and al l other	135 V	Maximum Ratings, Design-Naximum Values:
With heater volts =	150 V	Maximum Ratings, Design-Naximum Values:
cathode resistor lohms) bypassed =	56 ohm	Maximum Ratings, Design-Naximum Values:
With heater volts =	250 V	Maximum Ratings, Design-Naximum Values:
2 supply volts = I	10 V	Maximum Ratings, Design-Naximum Values:

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	5000 ohm	Promoted published value
Transconductance	8500 μ S	Promoted published value
Amplification factor	40	Promoted published value
Voltage	20 V	—
Current at	0.45 V	—

1971 RCA HB3 BINDER 3 OF 7

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	330 V	Promoted published value
Maximum plate dissipation	3 W	Promoted published value

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to plate	0.006 mA	Direct Interelectrode Capacitances:
Grid-No.2 Current	3.5 mA	Characteristics, Class A I Amplifier:
PLATE VOLTAGE.	330 V	Maximum Ratings, Design-Naximum Values:
GRID-No.2 VOLTAGE - See Grid-No.a Input.	2 V	Maximum Ratings, Design-Naximum Values:
For grid-No.2 voltages up	2 V	Maximum Ratings, Design-Naximum Values:
For grid-No.2 voltages be	2 V	Maximum Ratings, Design-Naximum Values:
PLATE DISSIPATION	3 W	Maximum Ratings, Design-Naximum Values:

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	400000 ohm	Promoted published value
Transconductance	5200 uS	Promoted published value

TUBE TINKER

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